

ACCIDENTS



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PRESENTED BY
THE MUTUAL LIFE INSURANCE COMPANY
OF NEW YORK.
RICHARD A. McCORRY President

DR. G. H. BUFFUM,

SHERIDAN, WYOMING

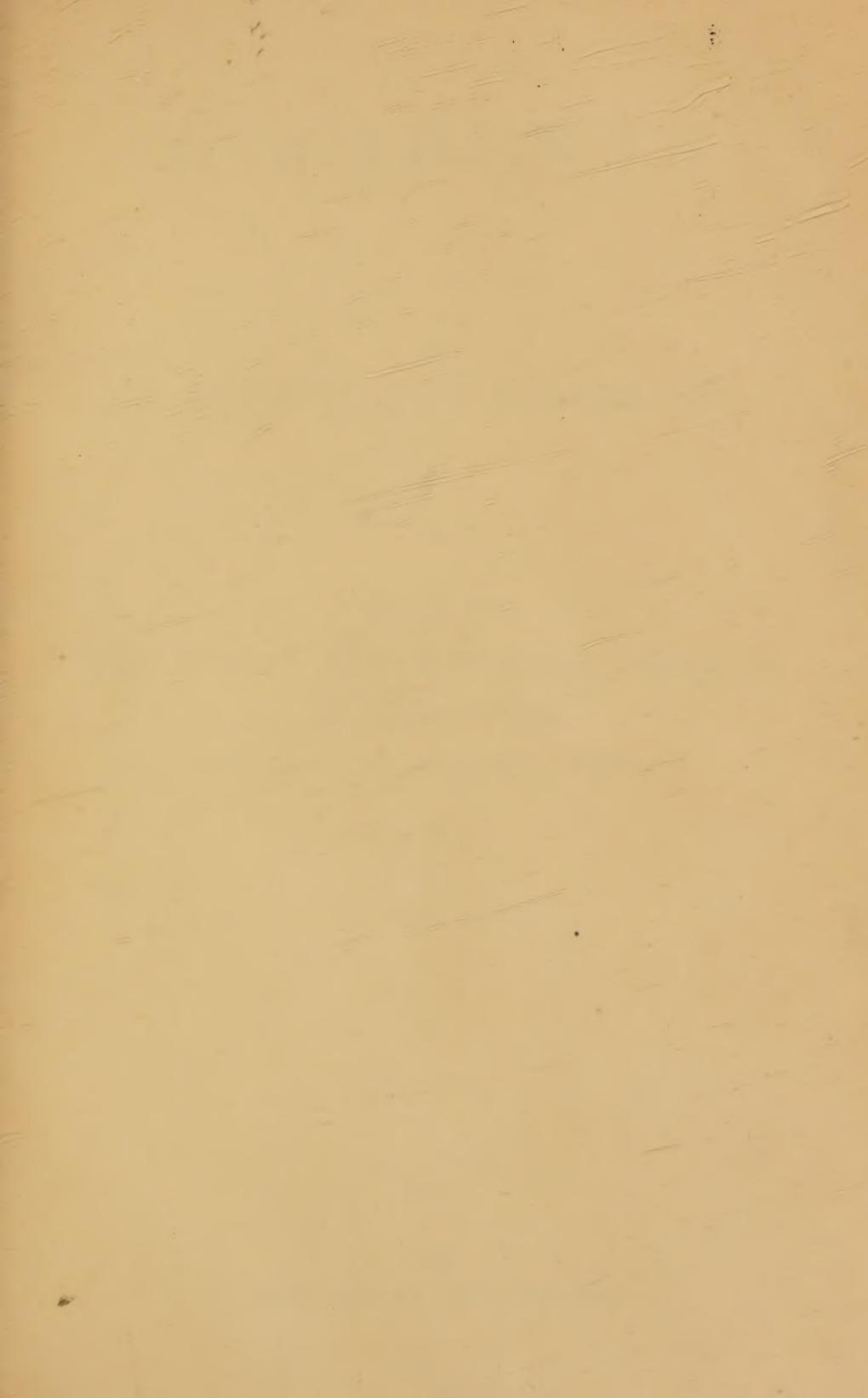
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DR. G. H. BUFFUM,

SHERIDAN, WYOMING



ACCIDENTS

A MANUAL FOR REFERENCE

ISSUED BY

The Mutual Life Insurance Company
of New York

RICHARD A. McCURDY, President

1904

PUBLISHED BY THE COMPANY

THE MUTUAL LIFE INSURANCE COMPANY OF NEW YORK

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ACCIDENTS

A policy in THE MUTUAL LIFE INSURANCE COMPANY OF NEW YORK may not prevent an accident, but it will materially aid in recovery.

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A wise precaution against accidents of all kinds
is a life policy in THE MUTUAL LIFE INSURANCE
COMPANY OF NEW YORK.

ACCIDENTS IN GENERAL.

An accident usually assembles a crowd around the victim. The first thing to be done is to get the people away from the injured person. A space of at least ten feet on every side should be kept wholly free from everybody except the one or two who are in charge of the operations for relief. If others are needed to assist in some special duty, as lifting, removing of dress, etc., they can be specially selected from the crowd for the moment and then dismissed. The kindest thing a bystander can do is to insist upon a free space around the injured person, and to select from the crowd those who will hold themselves in readiness to start for whatever the physician or the individual in charge of the case may require. To show how little real interest those nearest the patient take in his restoration, it will often be almost impossible to get one of them to run an errand in the interest of the sufferer.

Crowds and
accidents.

If the person has been thrown from a carriage, injured by a blow, a fall from a height, or in some similar manner, while there may be no evidence of fracture or other *external* injury, the nervous system has received what is called a "shock." As is commonly said, the person is "faint."

General treatment of an injured person.

A person suffering with such symptoms should be placed flat on his back, with the head, neck and shoulders slightly raised. The limbs, at the same time, should be straightened out, if practicable, so that the heart, which is already depressed in action, may act at as little disadvantage as possible. The cravat, collar and everything else calculated to impede the circulation toward the head or the movements of the chest should be loosened or removed. If the injury is slight, reaction will soon take place after giving the patient a sip of cold water, brandy (a teaspoonful in a tablespoonful of cold water), or aromatic spirits of ammonia (twenty drops in a tablespoonful of cold water), repeated in a few minutes. Gentle friction to the extremities; a few drops of cologne-water on a handkerchief to the nostrils; if the weather is hot, the use of a palm-leaf fan and hot flannels applied to the limbs and epigastrium (pit of the stomach) are likewise useful in assisting reaction.

Removing an injured person.

By this time, should a surgeon have arrived, he will examine and decide upon the special nature of the injury, and inaugurate measures of special relief. If he has not appeared, and it is thought best to remove the patient to the hospital or his home, a stretcher should be procured, or a substitute in the shape of a settee or shutter. Upon this the injured person should be gently placed, the body being supported as much as possible along its length, and the face covered so as to prevent, as far as practicable, the uncomfortable feeling of being stared at by passers-by. Four persons of uniform gait should then gently lift the stretcher and slowly carry the person to his destination. In most cities appliances for carrying injured persons are kept at the station-houses, and can be obtained on application, as well as the services of a good policeman. The authority of the latter is almost invaluable

in keeping away the crowd while conveying the person through the streets. If the patient is to be taken to the hospital, a dispatch from a police-station will secure, free of charge, an ambulance with competent attendants.

Directions for treatment of fracture and dislocations are given elsewhere (pp. 28-30).

SHOCK.

Mild forms of shock, or collapse, as it is sometimes called, are often, by the non-professional, confounded with fainting (syncope), and an ordinary attack of fainting is analogous to shock. The symptoms of the two vary rather in degree and duration than in kind.

Shock.

Life may be destroyed by certain agencies, as a blow on the "pit of the stomach" or a sudden and powerful emotion, and no visible trace be left in any part of the body. This is called "death from shock," and is the extreme result of shock.

Usually the patient lies in a state of utter prostration. There is pallor of the whole surface, and the lips are bloodless and pale. The eyes lose their luster, and the eyeball is usually partially covered by the drooping upper lid. The nostrils are usually dilated. The skin is covered with a cold, clammy moisture, often gathered in beads of sweat upon the forehead. The temperature is low, and perhaps the person shivers. The weakness of the muscles is most marked; as the phrase is, "The patient is prostrated." The mind is bewildered, the patient often insensible, unless aroused, and in many cases nausea and vomiting are present. In extreme cases the nausea and vomiting are not so apt to occur.

Symptoms.

Sudden and severe injuries, particularly if extensive, cause shock. Burns—especially in the case of children—

extending over a large surface, even if not to a great depth, are often followed by shock, and this complication requires the earliest attention.

Causes.

Certain poisons, as tobacco and tartar emetic, act in this manner, depressing the system. So does a current of electricity, as is seen in the effects of lightning.

Loss of blood produces or aggravates shock. Hence a slight injury with much loss of blood may be attended with more shock than a comparatively more severe injury without the loss of blood. Debility favors the influence of shock. A weak system is more easily affected by it, and, as should be expected, reaction from its effects in such a case is longer in taking place.

Influence of age.

As the vital powers of life decline, from engrafted or natural causes, there is less power available as a reserve to meet contingencies. In youth there is an available fund of this kind; in the adult the resources of the system may be equal to the task of ordinary maintenance, but in the aged, as said before, there is much less ability to deal with sudden losses of strength. The aged, therefore, are slow to rally from the effects of shock. They have more power of resistance than the young. The shock does not readily make an impression, as it does in the young, but when it does do so the impression endures. In the young the impression is more easily made, but sooner subsides.

Treatment of shock.

Treatment.—First place the patient flat on his back, with the head *raised not over an inch*. This is an important point in cases of ordinary fainting, and when the vital powers are depressed stimulants are required. The aromatic character of brandy enables it to be retained by the stomach when whiskey and other forms of alcohol are rejected. A teaspoonful on cracked ice every minute, until six or eight have been taken, is the

best way to give it. If the temperature of the body is raised by it, and there seems a revival of the action of the heart, enough brandy has been given. Twenty drops of aromatic spirits of ammonia in a teaspoonful of water may be given every two minutes, until four or five doses have been taken. Applications of heat to the extremities and "pit of the stomach" are very useful. Flannels wrung out in hot water, or bottles of hot water properly wrapped up, should not be neglected. Mustard-plasters are often used, but they are so inferior to heat for the purpose, if that can be applied, and so apt to blister, thereby making it impossible to use anything else on the surface, that some reluctance is felt in advising them.

Treatment
of shock

Nausea and vomiting are often present in shock, and can best be allayed by getting the patient to swallow small chips of ice whole. Ice can be chipped easily by standing the piece with the grain upright and splitting off a thin edge with the point of a pin.

Ammonia (smelling salts), applied to the nostrils, is often useful; and cologne, on a handkerchief, is frequently pungent enough to be of service in the same way.

FAINTING.

The head of the person who has fainted should be kept lower than the rest of the body. Should he be sitting in a chair at the moment, stand behind the chair, extend your hands over in front, so as to grasp the sides of the chair, take a step backward, and then slowly depress the back, the head being supported until the floor is reached. An assistant by holding the knees will prevent lateral slipping from the seat of the chair. It is so rapidly and easily done, besides so effective in its operation, that

Treatment
of fainting

little else remains to do. Usually the back of the patient's head scarcely reaches the floor before consciousness returns.

ASPHYXIA.

This commonly used word signifies an absence of pulse. It states a condition, but not the cause, and indicates suspended animation, produced by the non-conversion of the venous blood in the lungs into arterial. The supply of good air to the lungs being cut off by some cause, the necessary purification at that point no longer takes place, and death of the entire body ensues from the absence of arterial blood, or the presence of venous blood. Some physiologists regard it as due to the one cause and some to the other. In other words, the person dies because the blood is not purified.

There are several varieties of asphyxia: (1) Asphyxia from submersion in water or other fluids, as in ordinary drowning; (2) asphyxia from mechanical causes, as by strangulation or hanging, or from foreign bodies in the windpipe or its approaches; (3) asphyxia by inhalation of gases, known as suffocation; (4) asphyxia from torpor of the medulla oblongata (an important portion of the brain, at the junction of the spinal cord and what is called the brain), produced by the introduction into the blood of certain poisons.

DROWNING.

As said above, drowning is asphyxia from submersion in water or other fluids. This accident is of such frequent occurrence that it is the duty of every member of the community to understand the measures of prompt relief in such cases.

As soon as the body is recovered from the water, turn

the face and head downward for a moment, and, while so doing, thrust a finger far backward into the mouth and depress the tongue forward. This favors the escape of a small quantity of water or mucus, or other substances, often collected at the base of the tongue, which tends to obstruct the entrance of air to the lungs. The barbarous practice of rolling a person over a barrel, or hanging him head downward, to permit the escape of water from the lungs, has almost ceased, in view of the fact, now generally known, that no water gets into the lungs.

If it is possible to get blankets or some other dry coverings, the body should be rapidly stripped of its clothing and placed in them. The extremities should be rubbed with the dry hands, and heated flannels applied to the rest of the body, which should lie almost flat. If these things can be done in a house nearby, so much the better; but no time should be lost in transporting the person.

The following is the condition of affairs: Each atom of the body requires arterial blood, which is blood purified in the lungs by exposure to the air breathed. The purification has been suspended, and to that extent the life of the body is suspended. Movements of the chest, by which air is inhaled, are at a standstill, and cannot of themselves be resumed. If *artificial breathing* can be carried out for some time, it will be seen that these impurities may be so far removed that *natural respiration* can take place. Either of two methods may be employed for the purpose, the first and best known being "Sylvester's Ready Method."

This consists, after the above suggestions have been carried out, of pulling the tongue forward in order to favor the passage of air along the base of the tongue into the trachea (windpipe), and then drawing the arms away

Treatment.

Clear the
mouth and
throat.

Make hot
applications.

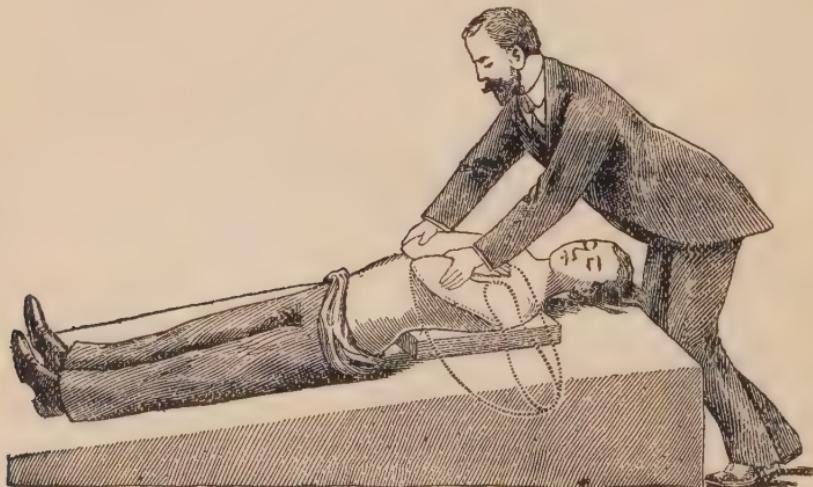
Condition of
the blood in
asphyxia.

Sylvester's
method of
artificial
respiration.

Sylvester's method of artificial respiration.

from the sides of the body and upward, so as to meet over the head, by means of which the ribs are raised (expansion of the chest) by the pectoral muscles running from them to the arms near the shoulder. A vacuum is thus created in the lungs, the air rushes in, and the blood is then purified by the passage of the impure gases in the blood-vessels to the air, and by the giving up by the air of a portion of its oxygen to the blood. The arms are now brought down to the sides, and the elbows made almost to meet over what is called the "pit of the stomach." This produces contraction of the walls of the chest and expulsion of the impure air from the lungs.

These two movements constitute an act of respiration, and should be persisted in, without interruption, at the rate of about sixteen to the minute. In other words, each complete movement should occupy about four seconds, which is about the natural rate of respiration in health.



It is sometimes quite difficult to keep the tongue from slipping backward, and when it does so it tends to prevent

the air from rushing into the windpipe. It is a good plan to draw the tongue forward by holding its tip with a handkerchief or dry cloth. If it is too slippery it may be necessary to pass a hatpin or a hairpin or a needle with a coarse thread right through the tongue. The tongue should be gently drawn forward with each inspiratory act and allowed to slip back gently with each exspiratory act.

The second "Ready Method," as it is called, is that of Marshall Hall:

The patient is placed flat on his face; gentle pressure is then applied to the back, the pressure removed, and the body turned on its side, or a little beyond that. The body is then again turned on the face; gentle pressure is again applied to the back, and the body again turned on the side. This should be done about sixteen times in a minute.

Both of these methods have the same object in view; either may be exclusively used, or one may be alternated with the other. Most physicians express a preference for the first described ("Ready Method of Sylvester"). Both of these procedures should be practiced in advance by the reader, because such practice is more easily remembered than a concise rule. There are few people in ordinary life who will not find it useful to have knowledge of this kind at their fingers' ends.

In speaking of the restoration of persons drowned, it is often said that they were good swimmers and must have been attacked by "cramps." This is a spasmotic contraction of the muscles beyond the control of the individual, and occurs after exhaustion of the muscles from overexertion. Persons suffering from debility should never be induced to go beyond their depth in the water, or out of reach of immediate assistance. There is no warning in advance of the seizure, and the person

Keep the
tongue
forward.

Marshall
Hall's
method of
artificial
respiration.

Advantage
of previous
practice.

Cramps
when
swimming.

sinks at once. Many lives are lost each season, in shallow as well as in deep water, from these seizures, which could have been avoided had the bather, perhaps just recovering from an attack of sickness, or even indisposition, not neglected the precautions mentioned.

Recovery from asphyxia by drowning can scarcely be expected to take place after an immersion of five or six minutes, although there are well-authenticated cases where restoration has taken place after an immersion of as much as twenty minutes. The effort ought to be made, and persisted in until the arrival of a physician, or for at least two hours. As soon as returning vitality permits, some brandy in a little water may be given; and, as the strength of the person is usually completely exhausted by muscular efforts of the most violent and continued character to save himself from drowning, some beef tea or other easily digested nourishment should be given. He should be kept in bed, very quiet and comfortably warm, for some hours at least.

HANGING.

Asphyxia
from
hanging.

Death from strangling or hanging results from asphyxia induced by pressure applied to the trachea (windpipe) from the outside. The body, if hanging, should be cut down at once, care being taken not to let it fall. Remove by the finger, as in the directions in drowning, any accumulation of mucus at the base of the tongue, and place the body on the back, just as directed for a person taken from the water. If the body is still warm, after removal of the clothing, the face, head, neck and chest should be dashed freely with cold water. To do this successfully, a person should stand six feet or more away with a bowl of cold water, and then throw its contents

with as much force as possible against the person. This having been repeated a number of times, the water should be rapidly wiped off with a towel. There is little essential difference in the condition of a person who has been hanged and one who has been drowned. In both it is asphyxia; in one case the air has been kept from the lungs by a ligature; in the other by a liquid. Artificial respiration must be used in both of them, assisted for the same reason and in the same manner by like auxiliaries.

Treatment.
There is an impression, quite prevalent among the ignorant, that a penalty is incurred at law by cutting down the body of a person found hanging unless the sanction of the coroner is obtained. Such delay is unnecessary and unjustifiable; and an effort should be made at once to restore suspended animation by the methods given.

SUFFOCATION.

There are several gases which when inhaled are followed by symptoms of asphyxia. The little valve (epiglottis) over the entrance of the trachea (windpipe) is so extremely sensitive that it will not permit even a drop of water to pass without a spasmodic closure of the opening, followed by coughing. It is not only sensitive to solids and liquids, but also to the presence of most gases. At one time it was thought that all gases were taken past it into the lungs, and thence absorbed into the blood. The prevailing opinion now is that most of them irritate the valve at the entrance of the trachea, and closure of the entrance follows. The breathing is thus interrupted much as it is in drowning, when the liquid cuts off the passage of air to the lungs; or as in hanging, when the ligature prevents the entrance of air. In such cases death results from asphyxia.

Asphyxia
from
suffocation

CARBONIC-ACID GAS.

Carbonic-acid gas. Asphyxia by this gas takes place as soon as the person inhales it. A sudden sense of suffocation is felt, with dizziness and inability to stand. If the individual is standing at the time the gas is taken into the lungs, and falls, he is in a position while down to inhale still more of the carbonic-acid gas, for it is heavier than the air.

Where found. This gas, sometimes known under the name of "choke damp," is produced in the ordinary process of fermentation and in burning or slackening lime; it is also found in mines, particularly coal mines, and in wells, cellars or caves which have long been closed. It is considerably heavier than the atmosphere, and is consequently found lying at the bottom of the cavity where confined.

How detected and dislodged. No well, vat, old cellar, or cavern of any kind, should ever be entered without first lowering a lighted candle into the deepest point. If the flame is extinguished, or burns dimly, this indicates the presence of this gas, and no one, under any circumstances, should be permitted to enter until this foul air has been removed. It lies at the bottom, because it is too heavy to ascend. It is not so heavy, however, that a strong current of common air will not dislodge it. Buckets of water dashed down into the well, or masses of lighted shavings or blazing paper, give enough movement to the air to dislodge the gas from its resting place. Freshly slacked lime also rapidly absorbs it. After testing the success of the efforts by again introducing the lighted candle, it can soon be known whether a person may enter with impunity.

Sometimes there may be no carbonic-acid gas in the cavity, and yet the efforts of the workmen may dislodge it from an adjacent space into the one in which they

are breathing. This possibility should never be lost sight of.

When a person is overcome by this carbonic-acid gas he is, of course, wholly unable to help himself, and must be removed at once. Sometimes a grapnel-hook can be used with advantage, but often the better way is to rapidly lower some bold, clear-headed person, with a rope securely fastened around his middle, who can seize and bring the unfortunate individual to the surface. No time should be lost in descending or rising, as the person lowered depends upon doing everything in the time during which he can hold his breath; for, of course, should *he* inhale the gas his position in this respect would be but little better than that of the man he attempts to succor. A large sack is sometimes thrown over the head and shoulders of the person who descends. It contains enough air to serve for several inhalations, while the texture of the material prevents the admission of the deleterious gas to a hurtful degree.

How to
remove a
person over-
come by
carbonic-
acid gas.

The person suffering from asphyxia, immediately after being brought out from the gas, should be placed on his back, the neck and throat bared, and any other obstacles to breathing quickly removed. His body should then be quickly stripped, and, if he has not fallen into water on being overpowered by the gas, his head, neck and shoulders should be freely dashed with cold water.

Remember, this is not "sprinkling," as commonly practiced, but, as said before, a person should stand off some distance with a bowl of cold water, and *throw* its contents with as much force as possible against the parts. Other bowlfuls should follow as rapidly as possible for half a minute, while one can count thirty slowly, then the dripping water be wiped away with a towel. This procedure should be repeated from time to time, as

Treatment.



required. Sometimes, if a brook of water is near, the stripped person might be repeatedly dipped into it, care being taken, of course, not to dip his face. Artificial respiration should be used as soon as possible.

If the person has fallen into water and become *chilled*, the use of the cold water in this manner should be avoided, as the evaporation of the moisture absorbs more heat than can be manufactured by the exhausted and overpowered system. In such a case the person should be put into a warmed bed, while hot applications and artificial respiration (p. 13) should be resorted to at once, as in asphyxia from drowning or hanging.

While using artificial respiration friction applied to the limbs should be kept up.

BURNING CHARCOAL.

Asphyxia from carbonic-oxide gas. Carbonic-oxide, a very poisonous gas, is given off during the burning of charcoal, and when inhaled quickly proves fatal. The person soon drops insensible, and dies of asphyxia, in much the same way as when one succumbs to carbonic-acid gas. The treatment recommended under the previous heading (p. 19) should be carried out at once.

ANTHRACITE AND BITUMINOUS COAL.

Asphyxia from burning coal.

These also, when burned in a close room (as in the case of a kitchen shut up for the night with an open stove of burning coals), give off, to some extent, the peculiar poisonous gas alluded to as coming from burning charcoal—carbonic-oxide—as well as other noxious gases. Persons sleeping in such a room, unless awakened as the air becomes fouled, will soon die or be found in a stupor. The treatment should be the same as described

in the preceding pages for asphyxia from inhaling carbonic-acid gas.

COMMON BURNING GAS.

Persons retiring at night often leave the gas "turned down," and the flame becomes extinguished. Enough gas may then escape to give trouble to the sleeper unless the room is well ventilated. Persons have been known to "blow it out" as they would a candle, and suffocation more or less complete has followed.

Asphyxia
from
ordinary
gas.

Treat as in the asphyxia from carbonic-acid gas just described.

FOUL AIR IN DRAINS AND PRIVIES.

This usually consists of sulphuretted hydrogen, and arises from the decomposition of the residual matters found in these situations. Great caution, on this account, should always be observed on opening and entering such places, or places in possible communication with them, especially if they have been long closed. A small quantity of pure sulphuretted hydrogen, if inhaled, is usually fatal; but in the cases referred to the gas usually exists diluted with common air. The breathing becomes difficult, the person loses his strength, falls, becomes insensible and cold, the lips and face are blue, and the mouth is covered with bloody mucus.

Asphyxia
from foul air
in drains
and privies.

The person should be removed as quickly as possible beyond the influence of the foul air, and the treatment described under the head of "Carbonic-Acid Gas" should be applied.

The possibility of such a disaster should always be borne in mind in opening long-closed drains or privy-vaults, and the danger lessened by taking a few pounds

of chloride of lime (bleaching powder), dissolving it in a pailful of water, and dashing it into the cavity. In the absence of this, lime and water in the form of the common " whitewash " may be employed. This gas readily combines with lime, to that extent freeing the air of the poisonous compound.

FOREIGN BODIES IN THE THROAT.

**Foreign
body in the
throat.**

A piece of food or some other substance often gets into the back of the mouth, and cannot be swallowed. In such a case the finger will often be able to thrust it downward, should that be thought best. A hairpin, straightened and bent at the extremity, will often drag it out. If the body is firm in character, a pair of scissors, separated at the rivet and one blade held by the point, will furnish a loop with which it may be extracted.

ACCIDENTS FROM LIGHTNING.

**Struck by
lightning.**

A person struck by lightning is usually rendered unconscious or nearly so. Cases are on record where a person struck exhibited no sign of life for an hour, and then recovered. Temporary paralysis of a portion of the body may result for a while, or a disturbance of some special function, such as the sight, smell, taste, or hearing. When death takes place, it is from shock to the brain and nervous system.

Treatment.

When the person exhibits little or no sign of life, the clothing should be rapidly removed and the body subjected to a dashing of cold water; then dried, placed in bed, and warmth applied, particularly to the "pit of the stomach," by means of glass or rubber bottles filled with hot water.

Artificial respiration should be kept up for an hour or

so, or until natural breathing is resumed. As said before, recoveries after an hour of supposed death are on record.

Some stimulant, as brandy (teaspoonful) or aromatic spirits of ammonia (twenty drops in a tablespoonful of water), repeated in a few minutes, may be given.

Burns caused by lightning should receive the same attention as a burn from any other cause. Sometimes an injury observed is not directly due to the electricity, but to a fragment detached by that agent from a neighboring substance.

BURNS AND SCALDS.

When the clothing catches fire, throw the person on the floor or ground, so that the flames will not rise toward the mouth and nostrils. Then without a moment's delay roll the person on the carpet, or, if possible, in a hearth-rug, so as to stifle the flames. If no rug can be had, use your coat. *Keep the flame as much as possible from the face, so as to prevent the entrance of the hot air into the lungs.* This can be done by beginning at the neck and shoulders with the wrapping.

Put the fire out.

If the burn or scald involves considerable surface, symptoms of shock from the extreme of mere weakness to that of utter prostration appear. This requires immediate attention, and a few drops of aromatic spirits of ammonia in water or a little brandy should be given, and repeated in a few moments until the return of strength is apparent. A burn, superficial as far as depth is concerned but covering a large surface, especially in the case of small children and aged people, is usually considered more serious than a burn smaller in extent but deeper and more complete. If there is reason to

Shock from burns.

suppose that hot air or steam has been inhaled, no time should be lost in obtaining the opinion of a physician as to the result of the injury to the throat and lungs.

Treatment.—The burned surface should be cleansed carefully by allowing water to trickle over it. The skin over a blister should not be cut off, but should be snipped with scissors near the edge, and the water gently squeezed out. This allows the skin to remain as a protective. If the blister re-forms it may be necessary to repeat this operation.

If the burn or scald is slight in character, one of the best applications is the cold water dressing (p. 28), keeping the linens used constantly wet.

In more severe cases a very good application is carron oil, which is a mixture of linseed oil and limewater in equal parts. Sweet oil alone is very good. Vaseline, with a little boric acid rubbed up with it, is also very soothing. Lard and baking soda mixed will relieve pain.

Wheat flour is often dusted over the burn; but this, with the discharges, hardens, and is of as little comfort as an application of small crusts of bread would be to the injured part. Cotton wool (carded cotton, cotton batting) is often used, but the fibers become imbedded in the discharges, and then cannot be detached without pain and disturbance of the wound.

Talcum powder or Fuller's Earth is very useful as a drying powder after the blister has been cut or any of the skin has become detached.

If the burn or scald, particularly the latter, is superficial in character, a simple and useful dressing is the application, with a brush or a soft wisp of old muslin, of the white of egg to the injury. As soon as the first layer dries, another should be applied. A lather of soap from the shaving-cup, applied with the brush in the same way, is

Treatment.

**Flour or
cotton wool
not to be
used.**

**Very simple
measures.**

often followed by immediate relief. These substances protect from the action of the air the irritated nerves beneath.

If a physician has been sent for, it is better not to make any domestic applications to the burned parts. Such things frequently prevent his using those better adapted, and keep him from forming a correct estimate of the real extent of the injuries.

If there is much shock and depression, stimulants will be needed, such as aromatic spirits of ammonia, brandy or whiskey. If there is much pain, laudanum can be given, five drops every two or three hours, until four or five doses have been administered

Burns and scalds practically differ but little from each other. Scalds are usually more confined to the outer cuticle, unless the substance containing the heat is viscid in character, as oil, pitch, etc., and does not rapidly run off the part with which it comes in contact. As to the usual remedies to be employed, the two may be regarded as presenting no essential difference.

If shock or
pain is
present

Scalds.

BURNS BY LIME, CAUSTIC POTASH, AND OTHER ALKALIES.

As a rule, these are troublesome, since there is not only removal of the cuticle (superficial skin), but destruction of the soft parts below. Lime is a powerful alkali, and rapidly destroys the parts with which it comes in contact. As it is useless to attempt to pick it off, an application should at once be made of something to unite with the alkali, so as to form a comparatively harmless compound. Vinegar diluted with water, lemon juice or any other dilute acid will answer. These things do not undo what has been done; they only prevent further mischief. The subsequent treatment is the same as for other burns. What has been said about the alkali known

Burns by
lime, caustic
potash and
other
alkalies.

as lime may be said about other alkalies, potash, soda, ammonia, etc.

BURNS BY ACIDS—SULPHURIC ACID (OIL OF VITRIOL), NITRIC
ACID (AQUA FORTIS), ETC.

As alkalies destroy the living tissue with which they come in contact, so will acids of sufficient concentration. In such cases applications of water will dilute them beyond their capacity to injure. Alkalies neutralize acids into harmless preparations, and cooking soda, washing soda or saleratus can be used for this purpose. Common earth, gathered almost anywhere, applied in handfuls, contains alkali enough of one kind or another to entitle it to the consideration of being one of the best (and at the same time most easily secured) applications in cases of burns by acids.

CONTUSIONS.

These common injuries are termed "bruises" by most people, and are the only injuries, besides wounds and fractures, produced by blows or pressure. The injury may be of the *simple* form—only a slight shaking or jarring of the texture, with no visible change except that resulting from the rupture of the blood-vessels. This is the most frequent. In the more *severe* but less frequent form, the contusion means broken blood-vessels and muscles, and tissues between and around them; the parts are thoroughly crushed, sometimes to a pulp, damaged beyond recovery, and ready to perish in the gangrene resulting from the extreme form of such an injury.

In contusions the first conspicuous symptom is that of shock, which generally, but not always, is proportionate to the extent of the injury. Thus a crushed finger is

attended, as a rule, with much less shock than a crushed hand or foot. Contusion of certain parts, as the larger joints, breasts and other portions of the body, is followed by most severe symptoms of shock. The pain is not always as severe as might at first be thought, for the nerves are so much injured as to be deprived of their ability to receive and transmit the necessary impression.

The quantity of blood escaping from the ruptured vessels depends, in a large degree, upon the size and number of the vessels injured, but in some degree upon the space in which the blood can accumulate. A single divided vessel in the scalp, owing to the looseness of the tissue in which the vessels are distributed, may permit a swelling, the result of the escape of blood, extending in area over half of one side of the head.

Discoloration is due to the color of the escaped blood, seen through the cuticle, and varies from blackness, usually indicating intense injury, through dark blue, purple and crimson, down to delicate pink, indicating only a blood-stained fluid.

Treatment.—In the milder contusions there is but little shock. When the shock is severe, place the patient on his back, head not elevated, and give stimulants as directed. (See Shock, p. 10). The next thing is to limit the consequences likely to ensue from the ruptured blood-vessel. This is best done by lessening the supply of blood to the part by elevating this, if possible, above the heart, and applying cold, in the shape of powdered ice tied up in towels, to the part and along the course of the larger vessels leading to the injury.

A large piece of ice secured in a towel, so that the pieces cannot escape, can be reduced to fine fragments by a blow or two against the wall. After the ice has been on for a time, water may be substituted in the shape of a

Symptoms.

Treatment.

drip;* or several thicknesses of wet towel may be applied, but they must be dipped in cold water, squeezed out, and changed every minute or two. If not changed, the wet towels really act as poultices to the part, inviting what we should try to prevent. When the surgeon appears, special measures will be directed by him. Recollect it takes a great deal of heat to convert ice into water, and water into vapor, and if the patient has not this heat, symptoms of chilliness will be observed. When this happens the application must be stopped, and the moisture must be taken up with a towel. Particular attention should always be paid to keeping the bed-clothing and everything else perfectly dry and neat.

Mashed finger and its treatment.

A common accident is a "mashed finger" resulting from the member being caught in a closing window, or from lack of precision in using a hammer. The firm bone beneath and the blow above usually contuse (bruise) the tissues (veins, vessels, muscles, etc.) between, and often the pain and other symptoms last some days.

Wrap up in a bandage of old muslin, and keep constantly wet with cold water, or some mild astringent like Pond's Extract. If there is much pain add laudanum. The discoloration and swelling may remain some days after the pain subsides. Stimulating liniments can now be used to encourage an extra flow of pure blood to the part, and the washing away of the injured blood.

FRACTURES.

Fractures, varieties of.

These may be divided for our purposes into two varieties—the simple and the compound. In a simple

*A pitcher, or some other vessel, of water placed higher than the injured parts, with a moistened string or strip of linen. One end of the string is placed in the water, while the other hangs down on the outside, so that the water will drip along the string from the vessel to the point of contusion.

fracture the bone is broken, and there is some laceration of the soft parts around it, but no break in the skin. In a compound fracture the skin over the seat of the fracture is also broken, and sometimes the bone protrudes.

There is always some shock, and great pain in the broken bone, especially if it is stirred. If surgical assistance can be obtained without removing the patient, he should be left lying quietly. All that need be done is to cut the clothing over the affected part and put on it cloths wet with cold water, which will allay the pain to some degree. If he has to be removed, it will be necessary to make some kind of a splint which will hold the limb immovable. The best thing for this is two pieces of board, each long enough to extend beyond the joints above and below the broken bone and a little wider than the thickness of the limb. These boards should be well padded with cotton batting, or several layers of cloth, or wool, or hay, or anything that will be soft enough to take off the direct pressure of the boards. They should then be placed on each side of the limb and firmly bound to it by tying handkerchiefs or strips of cloth around them. If boards cannot be obtained, anything stiff may be used, as canes or umbrellas. A very good splint for the leg is a pillow, which is placed under the leg and then bound firmly around it. The patient can now be placed very gently on a stretcher, made of a shutter or a bench, and carried very carefully home. Of course it will be necessary to consult surgical advice in order to have the bone properly set.

If the fracture is compound, the break in the skin should be treated like any other wound and some antiseptic directly applied. (See p. 38 et seq.) Otherwise the treatment is the same as for a simple fracture. Simple fractures may be converted into compound fractures by

Treatment.

careless handling. Therefore never lift an injured person until you have satisfied yourself as to the presence or absence of a fracture.

DISLOCATIONS.

These occur when one bone is displaced from another at a joint. Little can be done to reduce them except by surgical aid. If it is necessary to move the patient before this can be had, it should be done very gently, and the parts kept as immovable as possible. If the dislocation should be compound, as rarely happens, the open wound should be treated antiseptically. (See p. 38 et seq.) A joint which has been dislocated is much weaker than before, and can be easily dislocated again.

SPRAINS.

These are due to the stretching and tearing of the ligaments around a joint, and are accompanied by great pain and swelling.

Hot-water applications are the best to relieve the pain and reduce the swelling. The joint should be kept absolutely at rest. The best way to secure this is to strap the joint for some distance above and below with adhesive plaster, layer upon layer. Any weak spot which develops in the dressing can be easily reinforced by an extra layer or two. Care should be taken that the strapping is not so tight as to interfere with the circulation of the blood. This can be determined by noting whether the part below the strapping remains warm. If it becomes cold and remains so, the strapping is probably too tight, and should be promptly removed.

After all, sprains are very unsatisfactory to treat. Not infrequently they take a longer time to heal than a fracture, and the joint is usually left weakened.

WOUNDS.

Wounds,
varieties of.

For systematic study, wounds may be classified according to their direction, or depth, or locality; but for our purpose they may be arranged after the mode of their infliction: (1) Incised wounds, as cuts or incisions, including the wounds where portions of the body are clearly cut off; (2) punctured wounds, as stabs, pricks, or punctures; (3) contused wounds, which are those combined with bruising or crushing of the divided portions; (4) lacerated wounds, where the separation of tissue is effected by or combined with the tearing of them; (5) poisoned wounds, including all wounds into which any poison, venom, or virus is injected.

Any of these wounds may be attended with excessive hemorrhage or pain, or the presence of dead or foreign matter. As all wounds tend to present several common features, a few words will be said about these before describing the distinctive characteristics of each.

The first is *hemorrhage* (bleeding). This depends, as to quantity, upon several conditions, the chief of which is the size of the blood-vessels divided, and to some extent upon the manner in which it has been done. A vessel divided with a sharp instrument presents a more favorable outlet for the escape of blood than one that has been divided with a blunt or serrated instrument, or one that has been torn across. Except in the first named, the minute fringes or roughness necessarily left around the edges of the vessel at the point of division retard the escape of blood and furnish points upon which deposits of blood, in the shape of clots, can take place. Hence, all other things being equal, an incised wound is usually attended with more hemorrhage than a contused or lacerated wound.

Hemorrhage
from
wounds.

The bleeding may be simply an oozing from the smallest

Capillary hemorrhage. blood-vessels, called the capillaries. This form of bleeding is not of much consequence, and can easily be checked.

The bleeding may be from a vein, and is then called **Hemorrhage from veins.** venous. The veins are the larger vessels which carry the blood back to the heart. The blood from them is purple and flows evenly, without any force.

Hemorrhage from arteries. The bleeding may be from an artery, and is then called arterial. The arteries are large distributing vessels which carry the blood from the heart to the extremities. The blood from them is bright red and flows in pulsations or jets, with some force. This is the most dangerous form of bleeding and the hardest to control.

While we are not able sometimes to ascertain the kind of hemorrhage from a given wound, we should always try to determine it, for there may be considerable difference in the treatment.

Other symptoms of wounds. There is always some pain present in a wound, and this varies largely with the location and extent of the injury. Often it is not nearly so much as we expect to find.

In wounds of large size there is some shock, and when the wound is very extensive and crushing, the state of shock may be profound, even to unconsciousness. In some people the mere sight of blood may be enough to cause fainting. This, of course, is very different from shock and much easier to treat.

Treatment. Treatment.—There are several conditions to meet in the treatment of a wound, and the treatment can best be described under the following heads:

First—To stop bleeding.

Second—To clean the wound.

Third—To dress the wound.

Fourth—To relieve the other symptoms.

First.—Nature stops bleeding by causing the blood to coagulate in little clots, which plug up the open mouths of the divided blood-vessels and prevent the further flow of blood. The smaller the blood-vessel and the more sluggish the current of blood therein, the more quickly this is done. Therefore, this coagulation occurs first in the capillaries, next in the veins, and last of all in the arteries. All that we can do is to aid nature in this by making the current of blood flow more slowly or by making the mouths of the vessels smaller.

If the wound is small and the bleeding mostly capillary oozing, the part should be elevated, and firm pressure applied directly to the wound, preferably through a clean wet cloth. A few minutes of this will usually be sufficient. If this does not suffice, we can try again, or we can apply water just as hot as can be borne without scalding, or we can apply pressure with a piece of ice wrapped in a clean handkerchief or a thin cloth. Heat and cold contract the blood-vessels, and pressure not only does this, but retards the current of blood.

If the bleeding is from a small vein, the above treatment will usually suffice. If the vein is larger, the pressure may have to be applied for some time. To do this, roll up a handkerchief or clean cloth into a small, hard wad, wet it thoroughly and then bind it firmly over the wound by means of another handkerchief or a strip of cloth. It may have to be kept on for some hours before the clots in the vessels are strong enough. The pressure should be sufficient to check the bleeding entirely.

If the bleeding is from a small artery, the above measures will often be enough, but if the artery is of any size these alone will not do. As arterial bleeding is very fast, whatever we do must be done quickly. We must bear in mind that, besides applying pressure and heat or

How to
stop the
hemorrhage

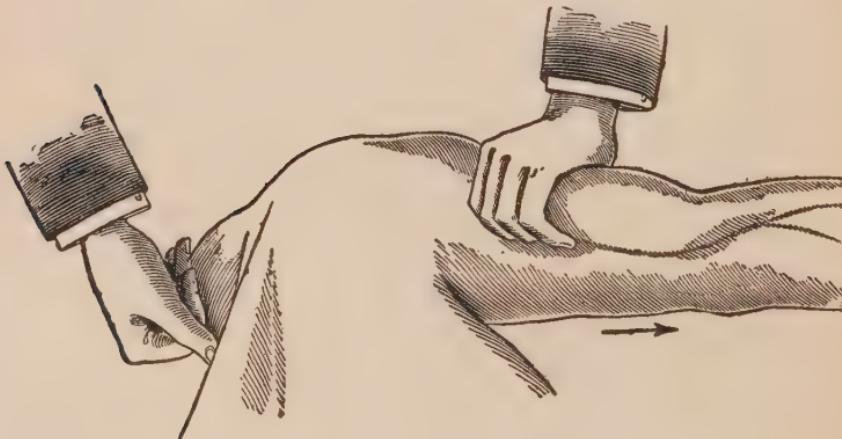
from
capillaries,

from veins,

from
arteries.

**Course of
the main
artery
of the upper
extremity.**

cold directly to the wound, what we wish to do is to retard the current of blood in the artery, so that firm clotting can take place. Now, the blood is flowing in the artery from the heart to the wound; therefore if we can compress the artery above the wound, we diminish or stop altogether the flow of blood toward the wound. We will first consider the case of a wound in the arm. The large artery which supplies the arm passes out of the chest over the first rib and under the collarbone. It then reaches the side of the arm just behind and below the front fold of the armpit. It now passes down the side of the arm, gradually turning to the front, until at the elbow it is right in the middle. Its course is shown in the accompanying cut.

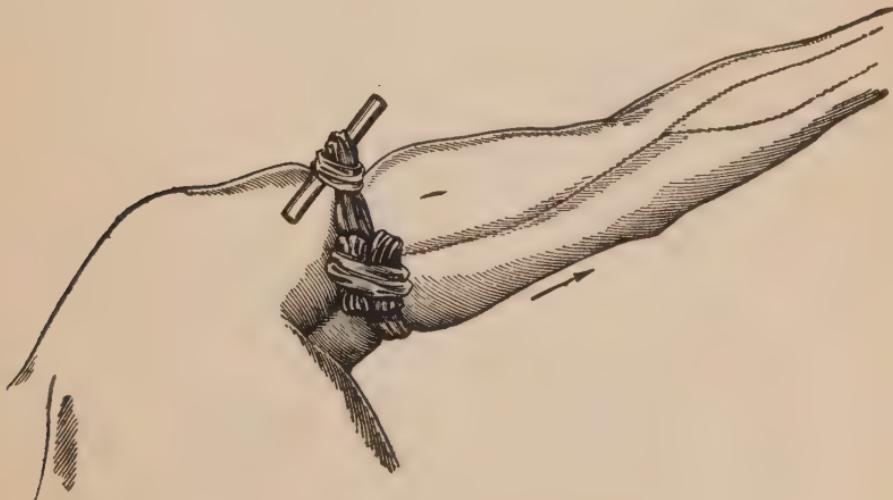


NOTE.—The dotted lines on the arm and forearm indicate the course of the arteries, and the points at which pressure can be most effectively applied.

The arrow points the course of the current of the blood of the artery, from the heart to the extremities.

The artery under the collarbone is called the subclavian artery, that in the armpit the axillary, and that along the side of the arm the brachial. Pressure can best be applied along the brachial, the pulsations of which can be felt. The pressure should be outward and slightly backward against the bone, and can easily be effected by means of the fingers or thumbs firmly applied. While one person is doing this, another can tie in a handkerchief a small round stone, or a piece of wood, or a watch, or anything that is hard. If nothing like these can be found, tie several firm, hard knots into one mass in the middle of the handkerchief. Lay the stone or knot over the artery close to the fingers that are compressing it. Then tie the ends of the handkerchief around the arm in a loose knot, through which is slipped a stick. By twisting this around and around we tighten the handkerchief until the blood entirely stops flowing, but no tighter. This constitutes

Treatment
of arterial
hemorrhage
from the
upper
extremity.

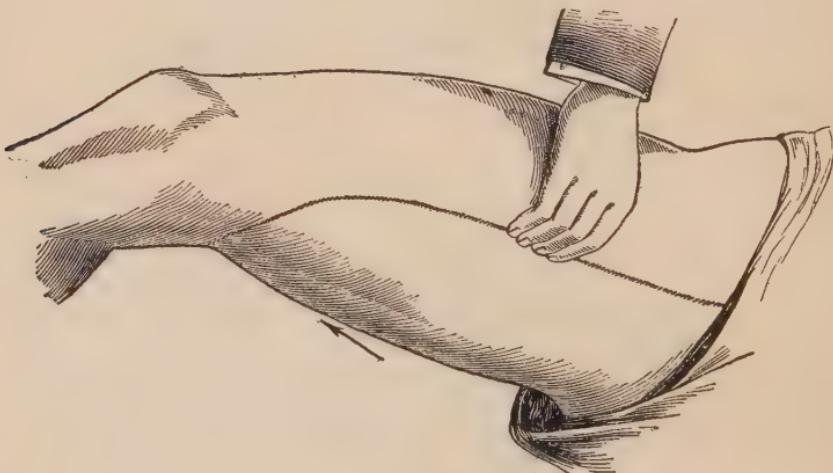


a "Spanish windlass," and is very effective. Its application is well shown in the preceding cut (p. 35).

If the wound is in the forearm, we apply this just above the elbow. If the wound is high up in the arm, it may be necessary to compress the subclavian. This is done by thrusting the fingers or the handle of a large key firmly down behind the collarbone and pressing the artery firmly against the first rib. It is difficult and painful to maintain pressure here for any great length of time.

**Course of
the main
artery of the
lower
extremity.**

In the lower extremity the artery reaches the thigh just where it joins the abdomen, and it can easily be felt pulsating about the middle of the groin. It then



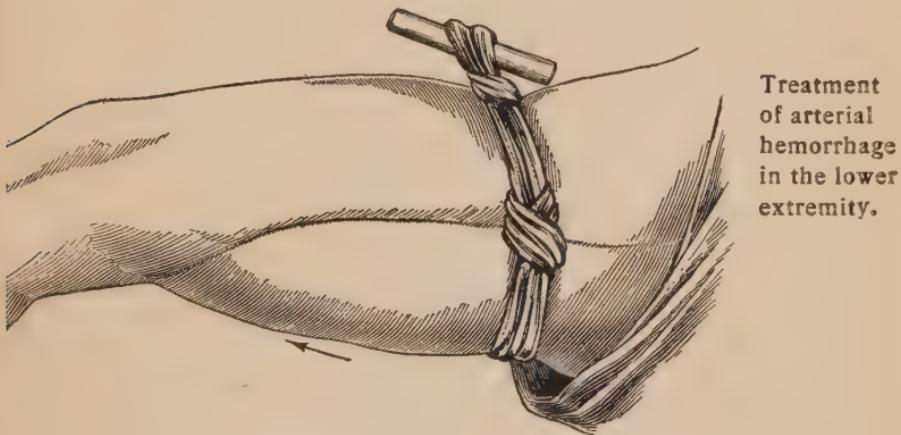
NOTE.—The dotted lines on the thigh and groin suggest the course of the large arteries, and the point at which pressure can be most successfully used.

The arrow indicates the direction of the current of the blood of the artery, from the heart to the extremities.

passes down the inner surface of the thigh, gradually turning backward until it can be felt at the back of the knee, in the middle, between the cords. In the thigh it is called the femoral artery, back of the knee the popliteal. Its course is shown in the preceding diagram (p. 36).

Pressure can be used as indicated, and the application of the Spanish windlass is shown in the cut on this page.

If the wound is below the knee, we can usually control the hemorrhage by applying pressure to the popliteal



artery, although, as this is rather deeply situated, we may find it necessary to apply it to the femoral, as shown in the above cut.

If an artery in the scalp is cut, firm pressure over and around the wound will always control it.

It is well to remember in a great emergency that nearly any bleeding can be checked for a time by Direct thrusting the fingers into the wound and pressing directly upon the bleeding point.

**Cleaning of
the wound.**

Second.—After the bleeding has entirely stopped, the next step is the cleansing of the wound. First we ought to make sure that our hands and our clothes are thoroughly clean. We should scrub our hands with soap and hot water and a nail-brush. It is advisable, if possible, to boil the cloths we use and the water we need for washing the wound. The surface around the wound should be thoroughly washed with soap and water. The wound itself should be very gently washed, and any clots lying on its surface carefully wiped or washed away. Then all the soap should be washed away with plenty of water. After this we should apply liberally to the surface of the wound, and all around it, one of the following solutions: Carbolic acid, 1-30; or corrosive sublimate, 1-2000; or boric acid, 5-100.

**Ways in
which
wounds
heal.**

Third.—The next step is dressing the wound. This varies considerably, according to the nature of the wound. Wounds heal usually in one of two ways—by first intention or by granulation. Healing by first intention occurs when the wound is clean and the edges can be brought together and kept so. There is very little reparative material needed, the time of healing is short, and the scar left is thin and inconspicuous. Healing by granulation occurs when the edges of the wound cannot be brought together. The reparative material is poured out abundantly on the surface of the wound in the form of little granulations. These gradually increase and grow until they bridge over the gap in the tissues made by the wound. This takes a longer time, and the scar left is much larger. As the scar keeps contracting for a considerable time after the healing is completed, it sometimes causes serious deformities. When a wound becomes inflamed, it is due to the presence of certain germs which multiply in the wound and irritate it. These cause

suppuration, the formation of "matter" or pus, which prevents healing by first intention. These germs are very common, and can only be kept out of a wound by thorough cleanliness and the use generally of some antiseptic which destroys them.

If it is a small incised wound, the edges can be brought together by gentle pressure, and three or four layers of flexible collodion should be applied for some distance around and over the wound, each layer being allowed to dry before the next is put on. If this is not to be had, we can cover it with adhesive plaster. If it is a large incised wound, we have to use adhesive plaster, putting the strips across the line of the wound and taking care that the edges of the wound are brought close together. The accompanying cut shows this very well, although the strips of plaster may have to be placed closer.

Dressing of
an incised
wound.



We then dust liberally over the entire length of the wound some dry antiseptic powder, such as iodoform,

bismuth subnitrate, or the bismuth and boric acid mixture. Over this we place two or three wide layers of lint, or absorbent cotton, or clean cloths which have been well boiled and dried. The whole is kept in place by a few turns of a bandage or strips of cloth or plaster. We are thus careful in the dressing in order to prevent suppuration. If the wound does not show signs of inflammation, such as pain, heat and throbbing, we can leave this dressing on for a week or more, and when we take it off we expect to find the wound healed. When a wound becomes inflamed, we recognize the condition by these signs. In such a case we remove the dressing and see in what part the suppuration is taking place. We then take off the strips of plaster over that part. This permits the pus to escape if it has not already done so. We then wash out the cavity gently, but thoroughly, with one of the antiseptic solutions and dust into it one of the dry antiseptic powders. This dressing will have to be repeated every two or three days. It is of advantage to give a free purgative, such as Epsom or Glauber's salts, when a wound becomes inflamed.

If a wound is lacerated or the edges are badly contused we do not expect to get healing by first intention. We do not try to bring the edges together, for it would be useless. Hence we omit the plaster in dressing such a wound, but in all other respects it should be treated like an incised wound. Inflammation is much more common in this class of wounds, but oftentimes can be prevented by care. Even if it does not occur, we usually have to change the dressing every three or four days, for the discharges from the wound are very apt to soak through in that time.

Fourth.—If the wound is incised, there is little shock, as a rule; but when the wound is very large, or much

Treatment
of an
inflamed
incised
wound.

Dressing of
a lacerated
or contused
wound.

lacerated or contused, shock is apt to be quite marked. It should be treated as described on page 10.

If there is much loss of blood, fainting is apt to occur. It should be treated as described on pp. 11-12; but care should be taken not to over-stimulate, for then we may start the bleeding afresh. As fainting in itself retards the blood-current, it is of some assistance in stopping hemorrhage.

If there is much pain we shall have to give some anodyne. Laudanum is the best, in doses of five drops every two or three hours.

BITES.

Independent of the consideration whether any poison has been introduced, a bite may be regarded as a lacerated as well as a contused wound. There is usually a good deal of sloughing of the bitten parts, and no small amount of pain, owing to the nature of the wound. Care should be taken to remove from the wound any particles of clothing that may have been forced into it; then wash out with tepid water and castile soap. Usually the part is so much contused that no effort is made to secure adhesion of the opposite sides of the wound; but it should be treated as any other lacerated, contused wound.

Bites.

BITES OF DOGS.

Rabid dogs are much less frequent, perhaps, than is generally thought; and a rabid dog might bite many human beings without necessarily communicating hydrophobia. It is stated that of dogs bitten by others known to be hydrophobic, scarcely more than one in four become affected; and it is likewise said that among human beings, when no precautions are taken, not more than one in ten

Rabies, or
hydro-
phobia.

or fifteen are affected after being bitten. The celebrated surgeon, John Hunter, knew of twenty-one people who were bitten by the same dog, and only one of the number had hydrophobia. Besides, many persons have undoubtedly died with convulsions after having been bitten, not of hydrophobia, but as a result of anxiety and fright. One well-known physician, after having been bitten, as a precautionary measure blew out his brains.

Treatment of the wound.—Remove the clothing, if any, from the bitten part, and apply a temporary ligature above the wound. This interrupts the activity of the circulation of the part, and to that extent delays absorption of the poisonous saliva by the severed blood-vessels of the wound. While other things are hurriedly prepared, some one whose lips and mouth are free from breaks might attempt suction of the wound. The material extracted by the act, apparently chiefly of blood, should, of course, at once be ejected from the mouth of the person giving the assistance. The bite is really a lacerated and contused wound, and lying in the little roughnesses, and between the shreds, is this poisonous saliva. If by any means these projections and depressions affording the lodgment can be removed, the poison must go with them. If done with a knife, the wound would be converted practically into an incised wound, and would require treatment as such. If a surgeon is about, he would probably stand a probe upright in the wound, and with a sharp knife cut out the entire injured portion. Professional aid is not always at command, and in such a case it would be well to take a poker or other suitable piece of iron, heat it red hot, at least, in the fire, wipe off, and destroy the entire surface of the wound. As fast as destroyed, the tissue becomes white. An iron at white heat gives less pain than one "black hot," as smiths say; for in

**Treatment
of the
wound.**

**Further
treatment of
the wound.**

the latter instance the heat is scarcely sufficient to destroy, but only irritates, while in the former the greater heat at once destroys the vitality of the part with which it comes in contact. With a properly heated iron, not only the surface is destroyed, but the destructive influence extends beyond and into the healthy tissue far enough, if no point is neglected, to assure against infection.

Some are inclined to think that if the wound is at once well wiped out, and a stick of solid nitrate of silver (lunar caustic) rapidly applied to the entire surface of the wound, little danger is to be apprehended. It acts, but in a milder degree, like the heat of the iron upon the tissues. In case the heat or the caustic has been used, poultices and warm fomentations should be applied to the injury to hasten the sloughing of the part whose vitality has thus been intentionally destroyed.

There is a strange belief among the ignorant, particularly among the people from Ireland, that, whether the dog was "mad" or not at the time of inflicting the bite, if it should become so at any future time the disease will appear in the individual the animal has bitten. A dog, after having bitten a person, is likely, under this mistaken belief, to be slain at once. This should not be done, but the suspected animal should be placed in confinement and watched, under proper safeguards, for the appearance of the disease. Should no symptoms of the disease appear in the dog, it can be seen in a moment what unnecessary mental distress can be saved the person bitten and his friends.

Mr. Youatt, whose description of canine madness is generally quoted and accepted, says: "The disease manifests itself under two forms—the furious form, characterized by augmented activity of the sensorial and

Dog should
be kept alive
if possible.

**Symptoms
of rabies in
the dog.**

locomotive systems, a disposition to bite and a continual peculiar bark. The animal becomes altered in habits and disposition, has an inclination to lick or carry inedible substances, is restless and snaps in the air; but is still obedient and attached. Soon there is loss of appetite, and thirst; the mouth and tongue swollen; the eyes red, dull and half closed; the skin of the forehead wrinkled; the coat rough and staring; the gait unsteady and staggering; there is a periodic disposition to bite; the animal in approaching is often quiet and friendly, and then snaps; latterly there is paralysis of the extremities; the breathing and deglutition become affected by spasms; the external surface irritable, and the sensorial functions increased in activity and perverted; convulsions may occur. These symptoms are paroxysmal; they remit and intermit, and are often excited by sight, hearing or touch.

"The sullen form is characterized by shyness and depression, in which there is no disposition to bite and no fear of fluids. The dog appears to be unusually quiet, is melancholy and has depression of spirits; although he has no fear of water, he does not drink. (The fear of water, it should be said, is acquired by experience, the effort of swallowing being attended with spasm of the muscles of the throat, afterward often extending to the rest of the muscles of the body.)

"He makes no attempt to bite, and seems haggard and suspicious, avoiding society, and refusing food. The breathing is labored, and the bark is harsh, rough and altered in tone; the mouth is open from the dropping of the jaw; the tongue protrudes and the saliva is constantly flowing. The breathing soon becomes more difficult and laborious; there are tremors, and vomiting, and convulsions."

The Mutual Life Series of Health Books

Includes four volumes, of which
the present is one. The others
are entitled



CARE OF INVALIDS

EMERGENCIES

POISONS-REMEDIES

and will be sent free to any address upon request and three cents in postage for each. These books contain a vast amount of necessary, *practical* information, and form a set which not only possesses at all times a rare interest and value, but may, in case of sudden or urgent need, save the life of more than one member of your family. Write for them to-day!

The Mutual Life Insurance Company
of New York

RICHARD A. McCURDY, President

The History of Life Insurance in America

IS THE HISTORY OF

The Mutual Life Insurance Company of New York

(Founded
1843)

OLDEST
IN AMERICA

LARGEST IN
THE WORLD

Assets over \$401,000,000

Payments to Policy-holders over \$632,000,000

Has Earned More
for Policy-holders

Has Paid More
to Policy-holders

Holds More
for Policy-holders than any other Company in existence

—The Mutual Life Insurance Company—
OF NEW YORK

RICHARD A. McCURDY, PRESIDENT

Nassau, Cedar, William and Liberty Streets, New York City

Democrat Chronicle.

ROCHESTER, N. Y.

DECEMBER 8, 1903.

DIVIDENDS, 42 PER CENT.

Well Known Rochester Man Realizes on a Fortunate Investment.

The following letter from Nathan Stein, president of the Stein-Bloch Company of Rochester, tells of an investment that returned him 42 per cent. in dividends, a phenomenal record in these days of shrinking values in all classes of investment securities.

Rochester, N. Y., December 1, 1903.

Mr. Charles E. Bayliss, Manager, The Mutual Life Insurance Company of New York, Rochester, N. Y.:

Dear Sir: I wish to acknowledge receipt of your company's check for \$65,-396.50, same being the full cash surrender value of policy No. 324,613, \$50,000, upon my life.

I also wish to express my thanks for your promptness in the matter, and my appreciation of the liberal dividend treatment accorded me. Dividend declared amounts to \$27,396.00, or 42 per cent. of the premiums paid, which is in itself evidence of the great ability with which the affairs of your company are directed.

For fifteen years I have been insured for \$50,000.00, yet now receive back more cash than I have paid in premiums. If I had not passed the insurable age, would certainly make a new application for a like amount at this time.

Yours very truly,
Nathan Stein.

THE MUTUAL LIFE

OF NEW YORK

Is the Oldest Life Insurance Company in America and

AVAILABLE FUNDS

THE COMPANY OWNED DEC. 31, 1903

| | | | | | | |
|---|---|---|---|---|---|---------------|
| 1—Bonds and Stocks, amounting, at the Market Value, | : | : | : | : | : | \$214,713,238 |
| 2—Real Estate, chiefly in the large cities of the World where the Company does business | | | | | | 34,312,133 |
| 3—Cash in Banks and Trust Companies | : | | | | | 22,460,550 |

AND IT HAD LOANED:—

| | | | | | |
|---------------------------------------|---|---|---|--|------------|
| 4—On First Mortgages of Real Estate | : | : | | | 89,224,920 |
| 5—To Policy-holders on their Policies | : | : | | | 18,926,100 |
| 6—On Bonds and Stocks | : | : | : | | 14,217,500 |

AND THERE WAS DUE:—

| | | | | | |
|--|---|---|---|---|---------------|
| 7—For interest accrued, Quarterly and Semi-annual premiums, etc. | : | : | : | : | 7,967,218 |
| 8—Making the Total Assets, Dec. 31, 1903 | | | | | \$401,821,661 |

IN THE SIXTY-ONE YEARS OF ITS EXISTENCE, THE COMPANY HAS PAID TO AND ACCUMULATED FOR ITS POLICY-HOLDERS

\$1,032,

SURANCE COMPANY

RICHARD A. McCURDY, President

largest Accumulated Fund of any Company in the World

TOTAL LIABILITIES

DEC. 31, 1903

| | |
|---|------------------|
| 1—Amount required by law as a Reserve Fund for paying all the Company's Insurance Risks, as certified by the New York Insurance Department, and Claims due | \$339,826,818 00 |
| 2—Contingent Guarantee Fund, out of which future dividends to policies now in force will be payable as they become due by the terms of the policies of insurance | 59,164,843 66 |
| 3—Fund for Immediate Dividends to be paid on policies in 1904, according to contract | 2,830,000 00 |
| 4—Total Liabilities, as a Mutual Company | \$401,821,661 66 |

3,579.12

WHICH IS NEARLY TWO HUNDRED AND FIF-
TEEN MILLIONS MORE THAN ANY OTHER LIFE
INSURANCE COMPANY HAS ACCOMPLISHED

THE MOBILE REGISTER.

MOBILE, ALA.

TUESDAY, MARCH 22, 1904.

LARGE DIVIDENDS FROM THE MUTUAL LIFE.

Fifteen years ago I insured in The Mutual Life Insurance Company of New York for \$10,000.00 on the fifteen-payment life plan. I was recently given a statement of my dividends by J. D. Torrey, local manager for the Company here, on my policy which matures in May. This shows my earnings to have been over thirty per cent. of the payments made in cash, and I can either take a paid-up policy for ten thousand dollars, with a return to me of \$3,284.90, or I can take a paid-up participating policy for \$14,881.00. The dividend settlements are highly satisfactory. I desire to express my appreciation of The Mutual Life Insurance Company of New York, for the able and successful handling of my money, which I know to be the result of the labor of the Company's able and efficient officers, who, of course, deserve the credit for bringing The Mutual Life to the highest standard of perfection in life insurance.

JOHN L. RAPIER.

Acadian Recorder.

HALIFAX, N. S.

SATURDAY EVENING, MARCH 19, 1904.

ORIGINAL POLICY MORE THAN DOUBLED.

The Mutual Life Insurance Company of New York has recently settled policy 21,569 on the life of Thomas S. Whitman, of Annapolis, Nova Scotia, and the policy returned over twice its face value. The policy taken out was for \$5,000 and the final settlement amounted to \$10,535.

Mr. J. A. Johnson, the Company's representative for this region, has received the following letter relative to the settlement:

COLLAS, WHITMAN & CO.,
FISH EXPORTERS AND GENERAL COMMISSION
MERCHANTS.

HALIFAX, N. S., March 2, 1904.

MR. J. A. JOHNSON, Manager,
The Mutual Life Insurance Company
of New York, Halifax, N. S.

DEAR SIR—I herewith acknowledge receipt of check on the Bank of Montreal for \$4,556.00 being balance of value of policy No. 21,569 in The Mutual Life Insurance Company of New York, dated February 15, 1859, on the life of the late Mr. Thomas S. Whitman, of Annapolis Royal. This makes the total amount received as death claim \$10,535, the original face value of \$5,000 being more than doubled, although some of the dividends were used.

Thanking you for the prompt settlement, I remain, Yours sincerely,

A. HANDFIELD WHITMAN.

Following is an exact statement of the policy:

| | |
|---------------------------------------|-------------|
| Face of policy..... | \$5,000 |
| Additions to policy | 5,535 |
| Value as a death claim..... | \$10,535 00 |
| 45 premiums paid less cash drawn..... | 4,879 32 |
| Profits over cost..... | \$5,655 68 |

HER BEST ASSET.

Remarkable Benefits Received from A Mutual Life Policy.

Mrs. Henrietta E. Tichenor, whose husband's policy in The Mutual Life Insurance Company of New York provides her an income of \$1,000 a year for life, writes as follows to the Company:

NUEVA GERONA, Isle of Pines, Cuba.
January 4, 1904.

THE MUTUAL LIFE INS. CO. OF NEW YORK,

GENTLEMEN—I regard the income of \$1,000 a year for life, which The Mutual Life Insurance Company of New York is now paying me, as one of the best assets left me by my late husband. Not only does it relieve me of all anxiety whatsoever regarding the proper investment of funds, but it is a part of my income which I feel confident of always receiving.

HENRIETTA E. TICHENOR.

THE DETROIT FREE PRESS.

SATURDAY, APRIL 2, 1904.

**JAMES C. COLGATE
INSURED FOR \$1,500,000**

**MUTUAL LIFE ISSUES LARGEST
INDIVIDUAL POLICY.**

New York, April 1, 1904.—The largest insurance policy ever taken out by an individual, namely, one for a million five hundred thousand dollars, has just been issued by The Mutual Life, of this city, to James C. Colgate, banker and financier and member of the stock exchange firm of James B. Colgate & Co. Following its conservative methods, The Mutual Life has reinsured all but \$250,000 in other companies. Thus another name is added to the list of policy-holders, including George W. Vanderbilt, who carry a million dollars or more in The Mutual Life.

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